

## CLAIMS:

1. A method of calibrating a transmitter circuit having a first characteristic controllable by a first control signal and a second characteristic controllable by a second control signal, the method comprising:

defining a set of multiple signal values for the first control signal;

setting the first control signal to a level corresponding to a signal value from the set of multiple first control signal values;

adjusting the second control signal to cause the transmitter to operate in a desired manner;

measuring power in a signal transmitted by the transmitter while operating in the desired manner; and

repeating the setting, adjusting and measuring for each signal value in the set of multiple first control signal values.

2. A method as claimed in claim 1, further comprising recording data representing the measured power against the signal value from the set of multiple first control signal values.

3. A method as claimed in claim 1 or 2, wherein the data is recorded as entries in a look-up table.

4. A method as claimed in claim 1, 2 or 3, wherein the desired manner is defined by parameters including an adjacent channel leakage ratio range.

5. A method as claimed in any preceding claim, wherein the transmitter circuit comprises a first amplifier and a second amplifier, and the first characteristic is a characteristic of the first amplifier and the second characteristic is a characteristic of the second amplifier.

6. A method as claimed in claim 5, wherein the first amplifier comprises a power amplifier and the characteristic controlled by the first control signal comprises supply current to the power amplifier.

7. A method as claimed in claim 5 or 6, wherein the second amplifier comprises a conditioning amplifier, and the characteristic controlled by the second control signal comprises the gain of the conditioning amplifier.

8. A method of calibrating a transmitter circuit having a first characteristic controllable by a first control signal and a second characteristic controllable by a second control signal, the method comprising:

defining a set of multiple signal values for the first control signal;

defining a set of multiple power values representing power in a signal transmitted by the transmitter;

setting the first control signal to a level corresponding to a signal value from the set of multiple first control signal values;

selecting a power value from the defined set of multiple power values;

adjusting the second control signal to cause the transmitter to transmit a signal with a power corresponding to the selected power value; and

repeating the selecting and adjusting for each power value in the set of multiple power values.

9. A method as claimed in claim 8, further comprising recording data representing the second control signal against the power in the transmitted signal.

10. A method as claimed in claim 8 or 9, further comprising repeating the setting, adjusting, selecting and repeating for each signal value from the set of multiple first control signal values.

11. A method as claimed in claim 10 as dependent on claim 9, further comprising recording the data representing the second control signal and the power in

the transmitted signal against the signal value from the set of multiple first control signal values.

12. A method as claimed in claim 10 or 11, wherein the data representing the second control signal and the power in the transmitted signal is stored in a separate list for each signal value from the set of multiple first control signal values.

13. A method as claimed in claim 12, wherein the data in each separate list is recorded as entries in a respective look-up table.

14. A method as claimed in claim 8 or 9, wherein the set of multiple signal values for the first control signal is defined by using previously created data representing transmitted signal power values against first control signal values.

15. A method as claimed in claim 13, wherein the previously created data is used by selecting a power value from the defined set of multiple power values and calculating a signal value for the first control signal.

16. A method as claimed in any of claim 8 to 15, wherein the transmitter circuit comprises a first amplifier and a second amplifier, and the first characteristic is a characteristic of the first amplifier and the second characteristic is a characteristic of the second amplifier.

17. A method as claimed in claim 16, wherein the first amplifier comprises a power amplifier and the characteristic controlled by the first control signal comprises supply current to the power amplifier.

18. A method as claimed in claim 16 or 17, wherein the second amplifier comprises a conditioning amplifier, and the characteristic controlled by the second control signal comprises the gain of the conditioning amplifier.

19. A method as claimed in claim 14 or 15, wherein the previously created data is created using a method as claimed in any of claims 1 to 7.

20. A method as claimed in claim 19, further comprising:  
storing a set of starting values for the second control signal; and  
using the set of starting values when adjusting the second control signal to cause the transmitter to transmit a signal with a power corresponding to the selected power value.

21. A transmitter comprising:  
a receiver for receiving power data specifying a power value;  
an amplifier having a first characteristic controllable by a first control signal and a second characteristic controllable by a second control signal;  
a store for storing data representing power values, corresponding first control signal values and corresponding second control signal values;  
a controller coupled to the receiver and the store and responsive to the received power data for generating from the data stored in the store a first control signal for controlling the first characteristic and a second control signal for controlling the second characteristic.

22. A transmitter as claimed in claim 21, wherein the amplifier comprises a first amplifier and a second amplifier, and the first characteristic is a characteristic of the first amplifier and the second characteristic is a characteristic of the second amplifier.

23. A transmitter as claimed in claim 22, wherein:  
the store comprises a look-up table;  
the controller comprises an analog-to-digital converter coupled to the amplifiers;  
the controller is arranged to apply the received power data to the look-up table;

the look-up table is arranged to respond to the application of received power data by supplying data to the analog-to-digital converter; and

the analog-to-digital converter is arranged to respond to the supplied data by outputting the first control signal to the first amplifier and the second control signal to the second amplifier.

24. A transmitter as claimed in claim 23, wherein the controller is arranged to output the first control signal values and the second control signal values directly to the analog-to-digital converter.

25. A transmitter as claimed in claim 23 or 24, wherein the controller comprises a processor for:

processing data from the store to produce data defining the first control signal and the second control signal; and

outputting the same to the analog-to-digital converter.

26. A transmitter as claimed in any of claims 21 to 25, wherein the store comprises:

a first look-up table for storing data representing power values and corresponding first control signal values; and

a second look-up table for storing data representing power values and corresponding second control signal values.

27. A transmitter as claimed in claim 26, wherein:

the store comprises multiple second look-up tables, one for each value in a set of first control signal values; and

the processor is arranged to use the specified power data to produce a first control signal value from the first look-up table and to use the thus produced first control signal value to identify a second look-up table for use in producing a second control signal value depending on the specified power data.

28. A transmitter as claimed in claim 22 or any of claims 23 to 27 as dependent thereon, wherein the first amplifier comprises a power amplifier and the characteristic controlled by the first control signal comprises supply current to the power amplifier.

29. A method as claimed in claim 22 or any of claims 23 to 28 as dependent thereon, wherein the second amplifier comprises a conditioning amplifier, and the characteristic controlled by the second control signal comprises the gain of the conditioning amplifier.

30. A transmitter as claimed in any of claims 21 to 29, wherein the data in the store is generated using the method as claimed in any of claims 1 to 17.

31. A method substantially as described herein with reference to the accompanying drawings.

32. An apparatus substantially as described herein with reference to the accompanying drawings.